

**Supplementary Table 1. Calculations to Predict Resting Metabolic Rate from Dual X-Ray Absorptiometry Scans**

Organ/Tissue	Mass (kg) <sup>a-c</sup>	Expenditure (kcal/kg/d) <sup>d</sup>
Skeletal Muscle	Men: $(1.13 * \text{Lean Tissue}_{\text{ARMS+LEGS}} (\text{kg})) - (0.02 * \text{age}(\text{yr})) + 1.58$ Women: $(1.13 * \text{Lean Tissue}_{\text{ARMS+LEGS}} (\text{kg})) - (0.02 * \text{age}(\text{yr})) + .97$	13
Adipose Tissue	$1.18 * \text{Fat Mass} (\text{kg})$	4.5
Bone	$1.85 * \text{Bone Mineral Content} (\text{kg})$	2.3
Brain	Men: $0.005 * \text{Head Area} (\text{cm}^2) + 0.44$ Women: $.005 * \text{Head Area} (\text{cm}^2) + 0.24$	240
Heart	$0.012 * \text{Lean Mass Trunk} (\text{kg})^{1.0499}$	441
Liver	$0.0778 * \text{Lean Mass Trunk} (\text{kg})^{0.9277}$	201
Kidneys	$0.0165 * \text{Lean Mass Trunk} (\text{kg})^{0.9306}$	441
Residual Mass	Total Mass (kg) - $\sum$ Mass (Skeletal Muscle + Adipose Tissue + Bone + Brain + Heart + Liver + Kidneys)	6.9

<sup>a</sup> Bosy-Westphal A, Reinecke U, Schlorke T, Illner K, Kutzner D, Heller M, et al. Effect of organ and tissue masses on resting energy expenditure in underweight, normal weight and obese adults. *Int J Obes Relat Metab Disord.* 2004;28(1):72-9.

<sup>b</sup> Koehler K, Williams NI, Mallinson RJ, Southmayd EA, Allaway HC, De Souza MJ. Low resting metabolic rate in exercise-associated amenorrhea is not due to a reduced proportion of highly active metabolic tissue compartments. *American journal of physiology Endocrinology and metabolism.* 2016;311(2):E480-7.

<sup>c</sup> Hayes M, Chustek M, Wang Z, Gallagher D, Heshka S, Spungen A, et al. DXA: potential for creating a metabolic map of organ-tissue resting energy expenditure components. *Obes Res.* 2002;10(10):969-77.

<sup>d</sup> Elia M. Organ and tissue contribution to metabolic rate IN *Energy metabolism: Tissue Determinant and Cellular Corrolaries.* New York, NY: Raven Press; 1992.